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(please, read carefully)

Pagina maestra
info@paginamaestra.it

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NICK YOUNG
*University of Milan*
*nickyoung1@gmail.com*

CLOTILDE CALABI
*University of Milan*
*clotilde.calabi@unimi.it*

# CAN MOVEMENT BE DEPICTED?

*abstract*

*It is natural to describe many pictures as of movement. We might for example say that a painting is of a horse rearing up, or a dog scurry along the pavement. The topic of this paper is how this "of" should be understood. Can a static picture depict movement, or is movement merely represented by, or suggested by, pictures, in some non-pictorial way? We argue that movement can be depicted and not merely represented. We examine three different views put forward by Le Poidevin, and use his third as a basis for our own view of movement depiction, which is a version of Hopkins's experienced resemblance theory of depiction.*

*keywords*

*movement depiction, resemblance theories, pictorial representation, movement perception, specious present*

Phenomenology and Mind, n. 14 - 2018, pp. 170-179
DOI:
Web: www.fupress.net/index.php/pam


ISSN 2280-7853 (print) - ISSN 2239-4028 (on line)

## 1. Is Movement Depicted or (Merely) Represented?

It is natural to describe many pictures as *of* movement. We would, for example, say that Theodore Gericault's *The Charging Chasseur* (1812) is a picture of a horse rearing up, and that Balla's *Dinamismo di un Cane al Guinzaglio* (Dynamism of a Dog on a Leash) (1912) as a picture of a dog on a leash scurrying along the ground, rapidly wagging its tail. There are a very wide variety of other examples, in a range of pictorial styles. Indeed, we have a specific label, 'still life', for pictures which are not of objects moving, suggesting that perhaps the majority of pictures we look at are of moving things. The topic of this paper is how this "of" should be understood. That is, can a static picture depict movement, or is movement merely represented by, or suggested by, pictures, in some non-pictorial way?

We can think of pictures as representing in two types of way. *The Charging Chasseur* depicts certain objects and their properties: a horse, a rider, the horse's shape, the colours of the rider's uniform etc., but we might think that the picture represents more than it depicts, perhaps it represents gallantry or honour, bravery or victory, but we would not say that these abstractions are depicted, or *seen in*, the picture. Rather, we might think, they are inferred or associated with what the picture is seen to depict: from what we know about officers, their steeds, and how they behaved in the world, we understand the picture as having certain connotations. Do pictures represent movement in the way that they depict objects and their properties, or in the way that they depict gallantry and victory?

Here are two prima facie reasons for thinking that movement can be depicted. First, it is natural to think that the sorts of thing that paintings can depict are things that can be seen, and, as well as seeing colour and shape, it seems that we can also see movement: providing that an object is moving quickly enough, for example the second's hand of a clock, or a raindrop slipping down a windowpane, we are able to see that it is moving.[1] Therefore, movement should at least be considered a *candidate* for what can be depicted. Second, denying that movement can be depicted leads to the peculiar consequence that pictures we would describe as of movement, in fact depict objects frozen in unstable positions, or as having strange features: Gericault's horse does not rear up, but is balanced precariously on two legs, Balla's dog stands still but has many tails and feet. If movement cannot be pictorially represented it seems we are forced to accept this strange consequence.

1 As we shall see later, various accounts have been put forward by psychologists and philosophers of perception as to how such experiences should be understood.

On the other hand, there are also prima facie reasons for doubting that movement really can be depicted. First, we might also think that although movement can be seen, this type of perceptual experience differs from those of seeing objects' colours, shapes, and locations. Whereas an object can be seen as either moving or staying still, no such dichotomy exists for colours or shapes. While it is possible to see a horse as unmoving, it is impossible, or at least very unusual, to see it as unshaped, or uncoloured as un-located. Moreover, we typically see objects moving or changing *by* seeing objects and their properties. Part of seeing a ball roll is to see it to be first here then there, and part of seeing a chameleon change colour is to see it as first red and then orange –we do not, at least in normal cases, see movement or change *simpliciter*. Given that the perception of movement is different from perception of colours, shapes, and textures, different enough for to warrant its own sub-discipline within philosophy of perception,[2] we might think that, unlike these intrinsic properties, it cannot, in fact be depicted. Second, and perhaps more obviously, pictures do not themselves *move*, at least not the pictures we are concerned with here.[3] Given this fact, there is a strong intuition that photos and paintings are 'snapshots', depictions of how things are *at an instant*, and thereby cannot be of the movements of objects which necessarily require more time than an instant; an object can have a certain colour or shape at an instant, and so these features can be captured on canvas, but it is far less obvious that movement can be presented in an instant of experience.[4]

We might think that this latter point is fatal, and that any investigation as to whether a static image can depict a moving object is a non-starter. However, we should not be so quick. Notice that a picture can depict an object as having certain properties without necessarily sharing those properties. That there is a speck of white paint in a depiction of an eye, does not mean that the eye is depicted as having a speck of white in it, but rather can be used by an artist to depict the eye as a shiny object which is catching the light. Similarly, and as we shall see later on, importantly, paintings and photographs are two-dimensional, and yet we are happy to say that they depict bodies which extend over three-dimensions.

We can see then that an account of movement depiction is not only desirable, but is not, at least not obviously, impossible. The remainder of this paper will be spent trying to develop just such an account. First, we shall examine and criticise some suggestions that Le Poidevin has made on this issue, before going on to show how his ideas on movement in Futurist paintings can be extended to provide an account of movement depiction more generally.

## 2. Three Proposals from Le Poidevin

One philosopher who has given significant attention to movement and pictures is Robin Le Poidevin.[5] He puts forward three quite different views on pictures and motion. In his 1997, he argues that movement is, in fact, *not* depicted. Rather, pictures can depict how moving objects are at an instant, and thereby non-depictorily represent a broader movement:

> In the experience of any change we may identify a particularly salient point, such as the moment a long-distance runner crosses the finishing line. We might represent this as a time-slice of the action, but in fact (since we perceived it) it has a non-zero duration.

2 See, for example, the recent volume edited by Phillips (2017)

3 Our interest here is not in cinema –*moving* pictures– nor in the type of op-art that gives the illusion of figures on the canvas actually changing or moving.

4 We shall return to this question later.

5 Another was Gombrich, whose arguments for the possibility of movement depiction stem from his idea that, metaphysically, there is no such thing as an instant (1960, 1964). We will not examine this idea here, but see Le Poidevin (1997, 2007, 2017) for criticism.

> This, then, is what static images are capable of depicting: specious instants which are parts of a larger movement represented by the image. Images can thus represent a movement by depicting perceptually minimum parts of it (1997, p. 186)

This is to adopt the austere account of depiction which we outlined above: we see marks on canvas as depicting an object at an instant at which it is in motion and from this *infer* the rest of its movement. For example, we see a depicted object as being in an unstable position and infer that it is moving, or we see some streaked lines behind a figure and as we are familiar with the convention that those lines represent fast motion, we infer that the object we see (in the picture) is running.[6]

In his 2007, however, Le Poividen presents a more ambitious account, one based on *recognition* accounts of depiction (Schier, 1986; Lopes, 1996; Currie, 1995). On a recognition account, a configuration of marks depicts a certain aspect if it activates the viewer's ability to recognise by visual means that aspect.[7] This ability on the viewer's side plays an essential role also in identifying what the picture is of. For some philosophers this recognitional ability is purely perceptual, for other philosophers it engages also conceptual capacities. Le Poividen draws on Currie's version of this approach:

> Currie suggests two quite different mechanisms for feature recognition: one involves reasoning and reflection, general beliefs about what is probable based on previous experience; the other is 'more automatic, less flexible, less rational'...The kind of recognition capacities that define depiction are, he holds, of the latter kind. (LePoidevin, 2007, p. 136)

On Currie's view a clear line can be drawn between what is depicted and what is merely represented: the contents of a picture which we recognise automatically and irresistibly are what it depicts, those that we recognise only through reflection or reasoning, it non-pictorially represents. Le Poidevin modifies this idea. Arguing that although there are more and less sophisticated types of recognition, we should get rid of the idea that there is a clear line between them: sophisticated vs automatic recognition is not either/or, but rather two ends of a continuum:

> to the extent that an image triggers a recognition capacity for x that is at the 'less sophisticated' end of the continuum, we will be more inclined to say that the image depicts an x. To the extent that the relevant capacity is nearer the 'more sophisticated' end of the continuum, we will be more inclined to say that the image non-depictively represents an x (2007, p. 137).

On this account, the line between what is depicted and what is non-depictively represented is hazy –if the capacities we deploy to recognise an image as being "of movement" are at the "less sophisticated" end of the spectrum, then movement is depicted, if they are at the 'more sophisticated' end, it is not. Arguably, our ability to recognise movement is on the less sophisticated end, this would explain why we are so quick to describe certain pictures as being "of" one movement or another.

6 For this view see Lopes (1996, p. 17)

7 Notice however that for some recognition theorists pictorial aspects are not identical to visual aspects.See on this Lopes, 1996, p. 119.

While we do not have a knock down argument against this view, questions can be raised as to how desirable it is as a general account of depiction. First, determining what a picture depicts based on how reflexively our recognition capacities are engaged seems to open up the possibility that just about anything can be depicted. It seems plausible to suppose that our recognition capacities can be improved through practice. The more often I am exposed to, say, *draught horses* the quicker and more reflexively I will be able to recognise them in both pictures and real life. If this is correct, it is easy to imagine a perceiver's "less sophisticated" recognitional capacities being trained up so that they automatically recognise just about anything, including quite abstract concepts such as gallantry or victory. Should we therefore say that, for some perceivers, pictures are able to depict such abstract concepts? An account of depiction that allows just about anything to be depicted does not seem an especially appealing one. Second, the idea of a recognitional continuum suggests that there might be *degrees of depiction*, if the recognitional capacities deployed are, say, at the midpoint of the continuum it seems that we have to say that motion is "somewhat" depicted, or partially depicted. It seems then that while this account of depiction allows that motion can be depicted it does so at the cost of endorsing an extremely liberal view of what counts as depiction.
Le Poidiven's most promising account of movement depiction can be found in his most recent work on the topic, in which he focuses on *Futurist* pictures, such as *Dinamismo di un Cane al Guinzaglio*:

> non-realist paintings depict, in part, by taking an aspect of our ordinary experience and making it the object of a visual experience...In the case of the Futurists, the aspect is the way in which the perception of a shifting scene is influenced by past perceptions, which are present in the picture. The picture thus confronts us with a temporally extended vision of the scene. This is not a depiction of motion in the recognition-capacity-triggering sense, since the picture does not, at least directly, trigger our visual recognition capacities for motion. But what makes it appropriate to talk of depiction here is that experience nevertheless has something in common with the visual experience of motion, namely awareness of the multiple of indeterminate locations of the depicted object. We need this second kind of depiction to accommodate the depiction of features of our own experience, as opposed to depiction of external objects. (Le Poidevin, 2017, p. 324)

We can see here that Le Poividen has moved away from recognition accounts of motion, and depict motion in virtue of capturing the blurry, indeterminately located, appearance that objects take on when they move rapidly. Such an approach can be understood as the endorsement of a *resemblance* approach to pictures. On this type of view pictures depict their objects in virtue of their resembling their objects. More specifically, in suggesting that pictures such as Balla's "have something in common with the *experience of motion*" Le Poidevin appears to endorse something like Hopkins' *experienced resemblance* account of depiction, whereby:

> What is crucial for pictorial representation is...that the marks be experienced as resembling the depicted object in this respect. To experience this resemblance is to see the object in the picture (Hopkins, 2003, p. 149)[8]

8 Other resemblance theories are available, which may also be compatible with the ideas we put forward here, but for simplicity's sake, we will focus on Hopkins.

Specifically, Hopkins argues that pictures depict what they depict in virtue of their resembling their subjects in outline shape, that is, "the shape things have if we ignore the dimension of depth" (ibid., p. 147). If you look at any object in the environment you will see it as just that: a thing extending through space, something with a certain three-dimensional shape. Looking at a cardboard box you will see it as a cuboid. However, on Hopkins' account, you will also see it as having a particular two-dimensional quadrilateral outline shape, the precise dimensions of which will depend upon which angle it is viewed from. Imagine you are viewing the box through a pane of glass, you would be able to cut a piece of paper so that when you glue it to the window it completely occludes the box. This, is the outline shape that from your current viewpoint, you see the box as having.

While Hopkins emphasises that outline shape is "a genuine property of things in our environment" (2003, p. 148), he also, importantly for our purposes, suggests that visual experience *presents* items as having outline shapes: "We do see outline shape, despite the apparently esoteric nature of that property" (1996, p. 60). It is also important to notice that seeing an object to have a particular outline shape (from a particular perspective) depends both on the properties of the object (its 3D shape) *and* features of our perceptual system. If our visual system were set up differently (if the way it structured our perception of the world were different) then the outline shape of an object might be presented to us differently (or it might not be presented at all). If for example we had less fine-grained visual systems (which some of us do) then we would see objects as having fuzzier, less determinate outline shapes.

With these ideas in hand we can now see how Le Poidevin account of futurist pictures can be thought of as resemblance theory. First, notice that when objects move rapidly, as when small dogs vigorously wag their tails and scurry along the ground, they are experienced as having a *particular type* of outline shape, what we might call a *motion blur* outline shape, in which the object does not seem to be located at one specific region, but indeterminately located at many. As with the outline shape of motionless objects, *motion blur* outline shape is dependent both on the properties of the object itself and structural features of the perceptual system.[9] A dog's wagging tail looks the way it does because of three dimensional shape of the tail, the locations which that object is moving through, the viewpoint from which it is being observed, and, crucially, the limited temporal grain of our visual system. We see the tail as a blur because there are limits as to how accurately we can see objects when they are moving rapidly. Objects which move at a slower rate, such as the languid flaps of an eagle's wings are seen clearly and distinctly as they move, very slow movements, such as a snail's slithering, are not detected at all. *Dinamismo di un Cane al Guinzaglio* can be thought of as depicting motion through resemblance. A dog with a rapidly wagging tail is depicted because the figure on the canvas is painted in such a way as to elicit the experience of resemblance in *motion blur outline shape*.

Considering motion depiction in this way certainly seems to have some merit. Unlike Le Poividen's first approach to these issues, it is an account of movement *depiction*, and, as it does not rely on a sliding scale of recognition, it is more appealing than his second. However, as it stands, we can criticise this approach for being somewhat limited scope: futurist paintings make up only a small proportion of pictures which we describe as *of* motion. Can only rapid movements, those in which objects take on a motion blur outline shape, be depicted? That is, should we say that Balla's painting is a depiction of motion, but Gericault's does not? In the

9 We intend motion blur to be understood as distinct from other types of blurriness or indeterminacy we might visually experience. Different for example, to the blurry way the world looks if one is short sighted, and to the indeterminate boundaries of clouds of smoke or steam.

remainder of this paper we will suggest how Le Poividen's approach to futurist pictures can be modified and extended so as to admit a wider variety of picture types.

## 3. Resemblance and the Depiction of Non-rapid Motion

We might think that despite its success in showing how *rapid* motion can be depicted, experienced resemblance cannot be used to provide an account of how *ordinary* motion can be depicted. Consider the following quote from Hopkins:

> "the outline shape of a standing horse differs from that of one cantering, and the outline shape of a horse cantering towards us differs from that of one cantering away" (1996, p. 82)

If we compare the outline shape of a horse cantering away from us to that of a horse cantering towards us then, clearly there is a difference, but there is *not* a difference in outline shape between that of a horse cantering away from us, and the outline shape that it would have if it were frozen mid-canter so that it balanced on three hooves. The reason why Le Poividen's account of futurist depictions of motion is convincing is that it conceives of futurists as drawing figures which can be experienced as resembling the *distinctive* outline shape which rapidly moving objects take on. Such an option does not seem available if we want to explain the depiction of non-rapid motion.

While intuitively compelling, we think the above argument is too quick. Objects moving at an ordinary speed *do* take on a unique visual appearance, and we see pictures such as *The Charging Chasseur* as depicting this type of motion in virtue of their resembling objects with this appearance. More specifically, we suggest that a horse seen in the middle of rearing up or cantering is seen as *a unified temporal part* of an object in motion, and that this, like the case of motion blur, and that it is seen as such due to certain structural features of vision. Pictures depict motion by resembling objects with this type of appearance. To see how this is possible we need to focus on a structural feature of vision which is often invoked to explain how we perceive motion in real life.

As has been mentioned, there are movements and changes that we can see, such as the seconds hand of a clock, but also movements that we cannot, such as those of the hour hand of a clock. The notion of a temporal field is often used to explain why this is the case. The basic idea is described by Soteriou as follows:

> ...the things we perceive are perceived as filling, occupying, or having some location within, an interval of time, just as the objects we see are generally seen as filling, occupying, or having a location within a region of space (2011, p. 195, see also, for example, Phillips, 2011, p. 363; Dainton, 2008, p. 634).

On this account, the world is not experienced instant by instant, but rather in "gulps" (Lockwood 2005, p. 365) of approximately one second in duration.[10] The contents of each gulp are *perceptually unified*, or, as Dainton puts it "diachronically co-conscious" (2010, p.135), in a way similar to how the visual *spatial* field makes our perceptions of different aspects of the world *synchronically* co-conscious: just as you are able to see the horse on your left and the tree on your right simultaneously, and as part of the same perceptual experience, you perceive what happens at the beginning of any particular gulp *together with* what happens at its end.

10 Dainton (2000, p. 171) estimates it to be about half a second or less, Lockwood "a second or a second and a half' (2005, p. 381), and Strawson about 300ms (2009, 5.9).

Diachronic unification accounts for the difference between perceptible and imperceptible movement in the following way. If an object moves from one location to a *discriminably different location* within a second, then the perceptions of the object in both locations are experienced together, and constituting a perceptual experience of the object *moving from* the first location to the second. If, however, an object is moving but so slowly that it is not in a discriminably different location within a second, then the viewer will not be diachronically co-conscious of the object in different locations and movement will not be experienced.

How can the temporal field provide an account of the *depiction* of non-rapid motion? We have seen that the pictures which are contenders for depicting ordinary motion are those that show objects in unstable positions, and objects in real life only adopt unstable positions when they are in the middle of a movement. We therefore only ever see objects in unstable positions *as parts of* temporally extended experiences of motion. As with perceptions of *motion blur* the unique appearance that objects in the midst of motion take on depends both on properties of the object itself –the unstable position that the horse has adopted– *and* structural features of the viewer's perceptual system –the temporal field entailing that the horse is seen as part of a temporally extended whole. Paintings that we would describe as being of non-rapid motion can therefore be thought to *depict* non-rapid motion by presenting the viewer with a figure which is experienced as resembling an object with this type of *unified temporal-part* appearance. *The Charging Chasseur* depicts a horse in motion because the outline shape on the canvas is experienced as resembling a unified temporal part of a 'horse rearing up' event.

This then is the central claim of our positive account. To get clearer on exactly what the commitments of such a position are, it will be instructive to look at what might seem an obvious challenge that could be made to it. One might be tempted to argue here that what we have presented is simply a disguised version of the claim that pictures can only represent movement but not depict it. Why not say that a viewer of the Gericault simply experiences the figure as resembling an object in the midst of motion, and then *infers* the movement?

Our response to this challenge draws on the uncontroversial idea that pictures are capable of depicting *three-dimensional shape*; a temporally extended movement is depicted by a figure resembling one of its unified temporal parts for the same reasons that a *three-dimensional object* is depicted by figure which is experienced as resembling one of its possible outline shapes.

It is natural to think that if material objects are depicted at all, they are very often depicted as three-dimensional. We do not think of the Gericault as depicting only a horse's front facing parts (a horse facade) from which we *infer* that it has three-dimensional girth. Rather, we see the picture (see *in* the picture) a *whole* spatially extended horse: in virtue of their eliciting experiences of resemblance in outline shape, pictures are capable of depicting three dimensional objects. This can be put in terms of the resemblance approaches to depiction that we have been concerned with in this section and the last: in experiencing a figure in a picture as resembling a three-dimensional object in outline shape, we are thereby experiencing the figure as resembling that three-dimensional object.

It may be objected here that any outline shape is compatible with an infinite number of three-dimensional shapes. The outline shape of the horse in *The Charging Chasseur* could be that of a fully three-dimensional horse, a flat cardboard cutout, or the front, but not the back, half of a horse mannequin. It might be thought that pressure could be put on resemblance accounts by asking for an explanation as to why an outline shape is experienced as resembling a single determinate three-dimensional object rather than any other possible configuration. Hopkins, however, thinks that proponents of experienced resemblance do not owe an account of the precise details as to why an outline figure is experienced as resembling one determinate three-dimensional shape. It is enough to recognise the fact that viewers *do* experience certain outline shapes as resembling certain three-dimensional objects. He also points out that, in real

life , as opposed to picture perception, "...visual experience includes the representation of 3–D arrangements" (p. 117), despite our only being in direct perceptual contact with those front facing parts of objects which reflect light onto our retinas. When looking at a real life horse, I do not see it *as* a flat facade, but rather as something with three-dimensional spatial extension. While there is a thriving debate as to how precisely we should understand our seeing objects as three-dimensional (see Briscoe, 2011; Nanay, 2010; Noe, 2004) that that our visual perceptual system presents objects as three-dimensional is not a matter of debate. Neither, suggests Hopkins, should our seeing three dimensional objects in pictures.

We suggest that our resemblance account of the depiction of non-rapid motion can be justified in a parallel way. Although there is room for disagreement about exactly how we can be diachronically co-consciousness of objects in time[11], that our experience presents temporally extended events involving objects is uncontroversial. When we experience a painted figure as resembling a unified temporal part of an object in motion, we thereby see that movement as being depicted. Put another way, we can say that as well as seeing depicted objects as extended in a third spatial dimension, we also see them and their movements as extending a short way through time. As with the depiction of three-dimensionality, a precise account of how this is achieved is unnecessary. It is enough to note that movement can be part of the content of perceptual experiences of the real world, that objects are seen to take on a unique appearance as they are moving, and that figures can be painted or captured in photographs which are experienced as resembling these unique appearances.

## 4. Conclusion

Here we have argued that an account of movement depiction is both desirable and possible. Moreover, it is attainable through extending a popular account of depiction –the experienced resemblance theory– in quite a modest way. Due to our ability to be diachronically co-conscious of an object at two different positions, we see things to take on a particular appearance when they move. Figures which elicit experiences of resembling objects with this particular appearance can therefore be thought of as depicting objects in motion: we see spatially extended objects in pictures, and so too do we see temporally extended events.

**REFERENCES**

Briscoe, R. E. (2011). Mental imagery and the varieties of amodal perception. *Pacific Philosophical Quarterly*, 92(2), 153-173;
Dainton, B. (2008). The experience of time and change. Philosophy Compass, 3(4), 619–638;
Gombrich, E. H. (1964), Moment and Movement in Art, *Journal of the Warburg and Courtauld Institutes*, 27, 293-306;
— (1960), Art and Illusion, Oxford: Phaidon Press;
Le Poidevin, R. D. (2017). Motion and the Futurists: capturing the dynamic sensation. In Phillips, I. (Ed.). (2017). *The Routledge Handbook of Philosophy of Temporal Experience*. Routledge;
— (2007). *The images of time: An essay on temporal representation*. Oxford University Press;
— (1997). Time and the static image. *Philosophy*, 72(280), 175-188;
Lee, G. (2014). Temporal experience and the temporal structure of experience;
Lopes, D. M. (1996), *Understanding Pictures*, Oxford University Press;
Hopkins, R. (2003), "Perspective, Convention and Compromise". In M. Atherton, H. Hecht, R. Schwartz (Eds.), *Looking into Pictures. An Interdisciplinary Approach to Pictorial Space*. MIT Press;
— (1996), *Picture, Image and Experience*, Cambridge University Press;

11 For example, the debate between extensionalist (e.g Phillips 2014) and intentionalist (e.g. Lee 2014) accounts of the diachronic co-consciousness.

Nanay, B. (2010). 'Perception and Imagination: Amodal Perception as Mental Imagery,' *Philosophical Studies* 150, 239–254;
Noe, A. (2004), *Action in Perception*, MIT Press;
Phillips, I. (2014). Experience of and in time. *Philosophy Compass*, 9(2), 131-144;
— (2011). Indiscriminability and experience of change. *The Philosophical Quarterly*, 61(245), 808–827;
Schier, F. (1986), *Deeper into Pictures*, Cambridge University Press;
Soteriou, M. (2013). *The Mind's Construction: The Ontology of Mind and Mental Action*. Oxford University Press.